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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,485	09/20/2006	Peter Russell Coward	124-1173	3134
23117 7590 03/09/2009 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
GREGORY, BERNARR E				
ART UNIT		PAPER NUMBER		
3662				
MAIL DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/593,485

**Applicant(s)**

COWARD ET AL.

**Examiner**

Bernarr E. Gregory

**Art Unit**

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date 9/20/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

1. The drawings are objected to because box-type drawing element 1 in Figure 1, box-type drawing elements 1 and 8 in Figure 2, box-type drawing elements 1 and 8 in Figure 3, box-type drawing elements 1 and 11 in Figure 4, box-type drawing elements 1 and 13 in Figure 5, box-type drawing elements 1 and 15 in Figure 7, box-type drawing elements 21a through 21c in Figure 8, and box-type elements 1 and 23 in Figure 9 lack descriptive labelling per 37 CFR 1.84(o).
2. As an example of the descriptive labelling required above in section 1, if a box-type drawing element were to represent an amplifier, then it ought to be labelled, "AMPLIFIER." Any descriptive labelling must have clear antecedent in the Specification.
3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are **required** in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The Specification is hereby objected to under 37 CFR 1.77(b) and (c) in that the Specification lacks the necessary sectional headings. Correction is hereby **required**.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Throughout claims 1-13, the uses of the terms "radiation field state" and "radiation field states" are indefinite and unclear in context. There is no definition in the Specification to make clear what this term means in the context of the claims. Please see 37 CFR 1.75(d)(1).

Apparatus claims 1, 2, and 4-13 are indefinite and unclear in that they are mis-descriptive of the invention as disclosed. The invention as disclosed and as illustrated in Figures 1-5 and 7-9 requires an enclosure in order to operate, but claims 1, 2, and 4-13 leave out this essential element. Only dependent claim 3 supplies the essential enclosure (i.e., the "container") in the claimed apparatus.

On line 3 of independent claim 1, the phrase "wavelengths of interest" is indefinite and unclear in that it does not clearly and definitely identify a set of wavelengths.

On line 4 of independent claim 1, the word "nontransmissive" is incorrectly broken into two parts. The prefix "non-" may not stand alone. This problem also occurs in independent claims 12 and 13.

On lines 2-3 of dependent claim 2, "the radiation field state or states" lacks clear antecedent basis in that it can not refer to either the "at least one radiation field state" (line 3 of claim 1) or to the "plurality of radiation field states" (lines 8-9 of claim 1).

On line 2 of dependent claim 4, the uses of "the radiation field state or states" lack clear antecedent basis in that they can not refer to either the "at least one radiation field state" (line 3 of claim 1) or to the "plurality of radiation field states" (lines 8-9 of claim 1).

On line 2 of dependent claim 5, "the radiation field state or states" lacks clear antecedent basis in that it can not refer to either the "at least one radiation field state" (line 3 of claim 1) or to the "plurality of radiation field states" (lines 8-9 of claim 1).

On line 2 of dependent claim 9, "the radiation field state or states" lacks clear antecedent basis in that it can not refer to either the "at least one radiation field state" (line 3 of claim 1) or to the "plurality of radiation field states" (lines 8-9 of claim 1).

On line 3 of dependent claim 4, the pronoun "it" lacks clear antecedent basis.

On line 3 of dependent claim 4, the use of the phrase "capable of moving" is indefinite and unclear in context in that the phrase does not clearly and definitely claim that there is motion.

On line 3 of independent claim 13, the phrase "wavelengths of interest" is indefinite and unclear in that it does not clearly and definitely identify a set of wavelengths.

Throughout claims 1-13, the uses of the term "sub-millimetre" are indefinite and unclear in context in that there is no plain definition of the term in the Specification and in that the use of the plain meaning of the term is not descriptive of the invention. Taken in its plain meaning, waves that are "sub-millimetre" would range from the shorter end of the millimetric wave range of the electromagnetic spectrum through infrared, through visible light, through ultraviolet, through X-rays, and through  $\gamma$ -rays. Plainly, this can not be the case in the context of the rest of the disclosure of the invention.

On lines 8-9 of independent claim 1, the "means for generating a plurality of radiation field states in a predetermined time interval" invokes 35 USC 112, sixth paragraph. See In re Donaldson Co., 29 USPQ2d 1845 (Fed. Cir. 1994). Under MPEP 2181, a claim limitation will be presumed by the examiner to invoke 35 USC 112, sixth paragraph, only if it meets the three prongs: (1) that the claim limitations must use the phrase "means for" or "step for"; (2) that the "means for"

or "step for" must be modified by functional language; and, (3) that the "means for" or "step for" must not be modified by sufficient structure, material, or acts for achieving the specified function. Taking the phrase "means for generating a plurality of radiation field states in a predetermined time interval" in claim 1, the first prong is plainly met by the use of "means for." Next, the second prong is met by this phrase in claim 1 by the use of the functional language "generating a plurality of radiation field states in a predetermined time interval" to modify the phrase "means for." Finally, the third prong is met in that the phrase "generating a plurality of radiation field states in a predetermined time interval" does not recite any structure, material, or acts to achieve the specified function. Thus, the phrase, "means for generating a plurality of radiation field states in a predetermined time interval" in claim 1 is plainly under 35 USC 112, sixth paragraph. It is noted that independent claim 1 is an apparatus claim. In the Specification, at page 5, lines 4-16 and at page 8, lines 10-22, there is some recitation of the functions to be performed to support the "means for generating a plurality of radiation field states in a predetermined time interval" in claim 1, but there is no plain recitation of structure to support the function of the "means for generating a plurality of radiation field states in a predetermined time interval." Please see 37 CFR 1.75(d)(1).

In dependent claim 2, the treatment of the phrase, "means for generating the radiation field state or states" is substantially that given above with respect to the phrase "means for generating a plurality of radiation field states in a

predetermined time interval" in claim 1 in that: (1) "means for" is plainly used; (2) the "means for" is modified by the functional language "generating the radiation field state or states"; and, (3) in that the phrase "generating the radiation field state or states" does not supply sufficient structure, material, or acts to support the function. So, "means for generating the radiation field state or states" in claim 2 likewise falls under 35 USC 112, sixth paragraph. And, the Specification fails to support "means for generating the radiation field state or states" by disclosing structure to perform the function as claimed in claim 2.

The same phrase "means for generating the radiation field state or states" is used in each of dependent claims 4, 5, and 9, and so, is treated as in claim 2.

In dependent claim 9, "means for changing the effective point at which the primary source provides an output of radiation toward the baffle and the reflective surface" is taken as invoking 35 USC 112, sixth paragraph, in that: (1) the words "means for" are plainly used; (2) the words "means for" are modified by the functional language "generating the radiation field state or states"; and, (3) the words "means for" are not modified by sufficient structure, material, or acts to support the specified function. Likewise, the disclosure in the Specification is not adequate to support the claimed "means for generating the radiation field state or states" in claim 9 in that there is no structure that is plainly set forth in the Specification to perform this function. Please see 37 CFR 1.75(d)(1).

In each of dependent claims 10 and 11, the uses of the phrase "means for changing the effective point at which the primary source provides an output of



radiation" invoke 35 USC 112, sixth paragraph, in that: (1) the words "means for" are plainly used in claims 10 and 11; (2) the words "means for" are modified by the functional language "generating the radiation field state or states"; and, (3) the phrase "means for" is not modified by sufficient structure, material, or acts to achieve the specified function. Neither the recitation on lines 3-4 of claim 10 nor the recitation on lines 3-4 of claim 11 is sufficient to support the specified function of "generating the radiation field state or states." Please see 37 CFR 1.75(d)(1).

Dependent claims 2-11 are unclear at least in that they depend from unclear independent claim 1.

7. The Specification is hereby objected to under 37 CFR 1.71 in that it fails to teach adequately how to make and/or to use the invention.

As discussed in section 5 above, the Specification fails to disclose sufficient structure, materials, or acts to support the claim limitations identified in section 5 above as invoking 35 USC 112, sixth paragraph. The functional descriptions in the Specification are not sufficient to support the identified claim limitations under 35 USC 112, sixth paragraph.

In addition, the Specification fails to disclose how to make and/or to use the invention without an enclosure or "container." The invention as disclosed and as illustrated in the drawing figures has an enclosure or a "container" as an essential part of the invention. Yet, only dependent claim 3 adds this essential feature to the claimed invention. Applicants have failed to teach one of ordinary

skill-in-the-art how to make and/or to use the invention without the essential enclosure or "container."

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Please see the remarks in section 7 above.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The examiner-cited prior art herewith is of general interest for showing the state of the related prior art.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernarr E. Gregory whose telephone number is (571) 272-6972. The examiner can normally be reached on weekdays from 6:30 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza, can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Bernarr E. Gregory/  
Primary Examiner, Art Unit 3662